

Abstract

Suspension System

A suspension control system designed to impart a variable supplemental resistive force to control vehicle body roll and to improve suspension performance through the use of magnetic rheologic force devices. Each of the force devices impart rheologically adjustable amounts of force and resistance to the vehicle suspension system based on a variable magnetic/electrical field created within the force devices. The control system further includes a plurality of sensors that monitor vehicle components and performance parameters, and send signals to a logic unit. The logic unit processes input from the sensors and sends electrical commands to the force devices, which take the appropriate action to optimize suspension system performance. The use of the magnetic rheological force devices supplants traditional stabilizer bars and the associated linkages, fasteners, brackets and insulators.